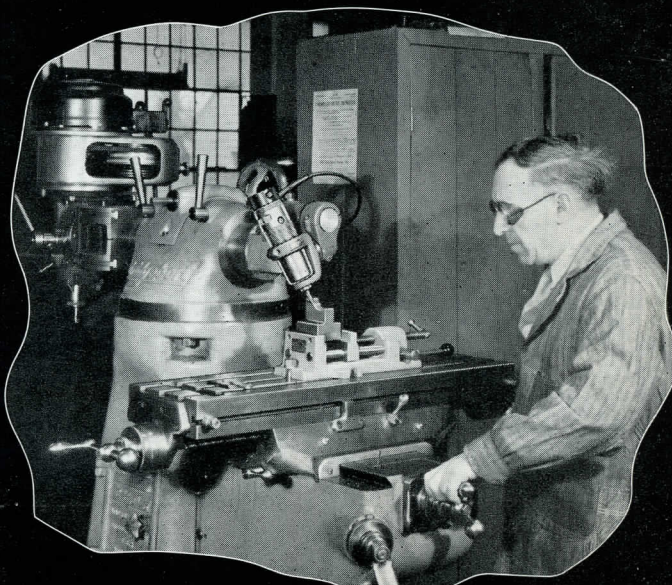
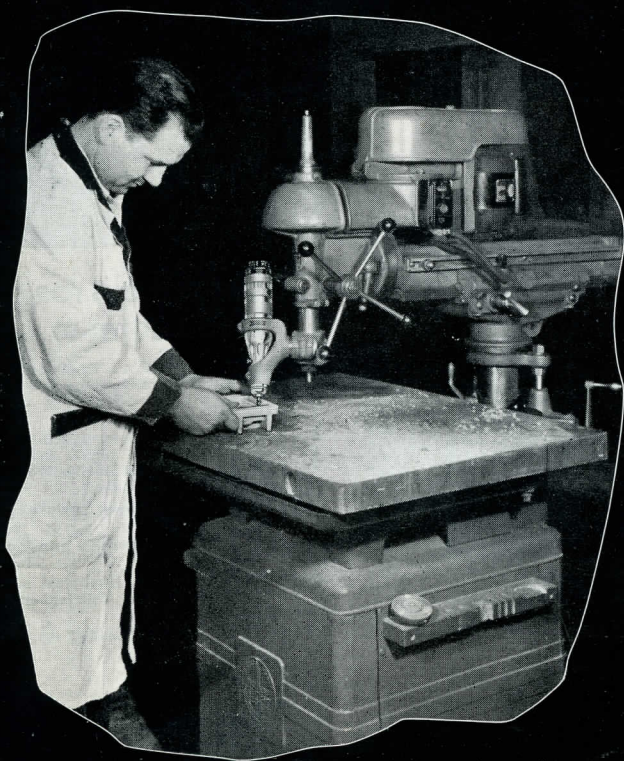
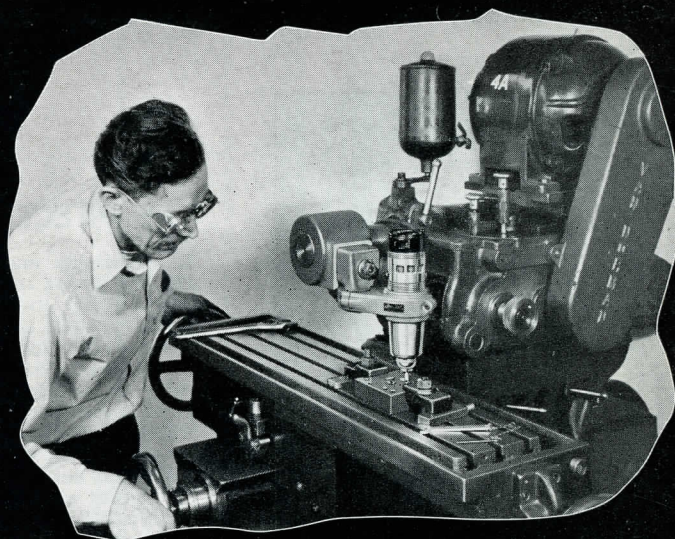
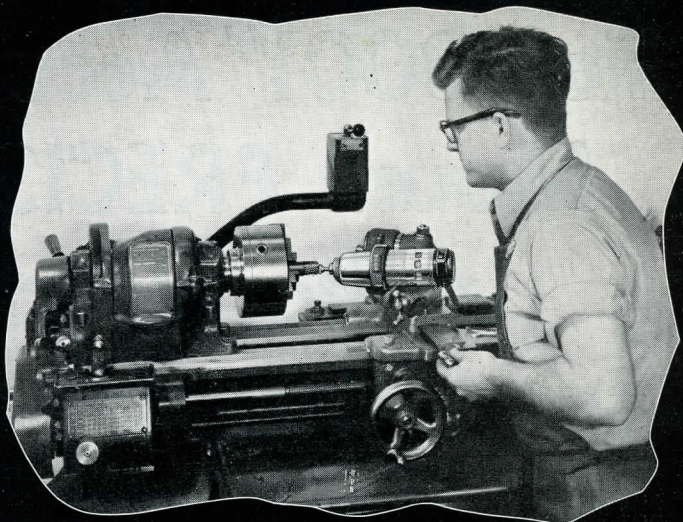


# Grinder-Millers and Mounts

Catalog FG8

Effective May, 1950



# For .0001" Accuracy at Lowest Cost Mount PRECISE Grinder-Millers in Standard Machine Tools

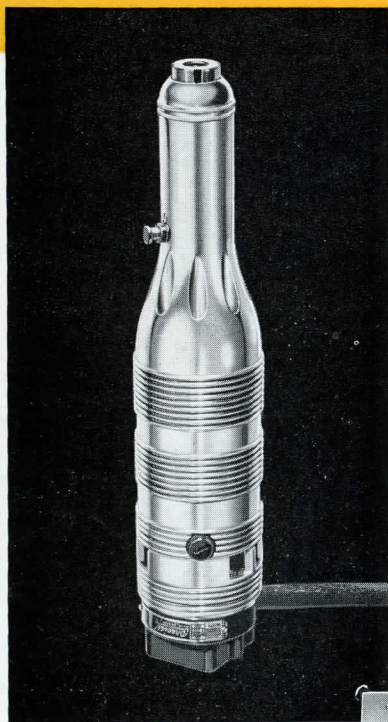
The cost-cutting advantages made possible by mounting the PRECISE Grinder-Millers on standard machine tools represent a recent major development in production engineering. The range of PRECISE machine tool applications, extending far beyond the few shown in this catalog, include internal, external, cylindrical and form grinding; precision milling with H. S. steel or tungsten carbide Midget Mills; sawing, routing, slotting, small diameter drilling, finishing, polishing and micro-finishing.

*Mounted as a motorized precision quill in standard lathe, milling machine, drill press or other stationary machine tool, one PRECISE Grinder-Miller with Universal Mount costing under \$150.00 will do*

*the precision work of heavy stationary machine tools costing up to 100 times as much. Savings from PRECISE start from the moment of purchase!*

The PRECISE Tool Mounts shown in this catalog are designed to adapt the PRECISE Grinder-Millers to the widest possible range of production set-ups. Specially designed fixtures for unusual set-ups are also available along with a complete line of mounts, attachments and accessories.

For information regarding special set-ups or production problems, write our Engineering Department for recommendations.



## SPECIFICATIONS FOR PRECISE SUPER 40

Voltage: 115 volts DC/AC, 25-60 cycles. Will operate on lower voltages and on voltages up to 440 when used with voltage adapters.

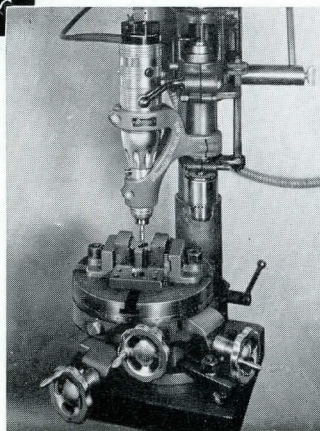
Speeds: Free speed above 45,000 rpm. Load speed range from 15,000 rpm to 45,000 rpm. Speed is controllable through use of PRECISE Speed Controls.

Power: Maximum power output at spindle, 1/5 H. P.

Collet Chuck: Type P parallel grip precision collets. Size range: .090" to .250".

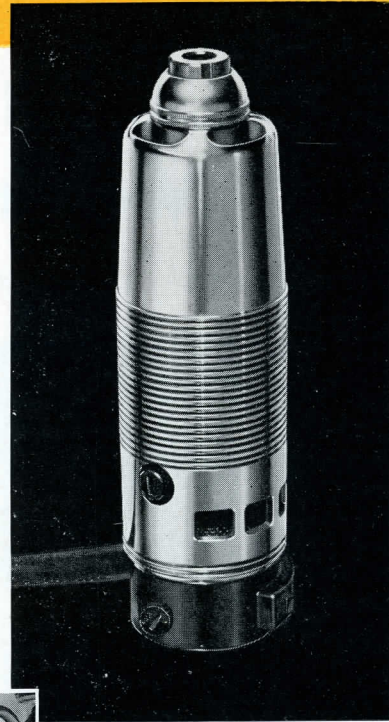
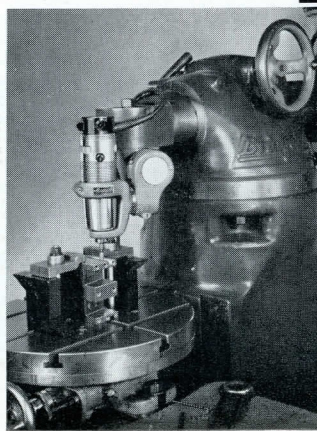
Tool Housing: Sturdy accurately machined aluminum alloy.

Tool Weight: 3 lbs., 5 oz.



## THE PRECISE GRINDER-MILLERS

In accurately machined housing, the air-cooled DC/AC motor of the PRECISE Grinder-Millers develops up to 1/4 H. P. at the chuck. The precision quill, accurate to .0001", turns at speeds up to 45,000 rpm. Speed range with speed control is from 15,000 rpm. to 45,000 rpm. Used with or without SUPER COOLFLEX Flexible Shaft Attachment or in machine tool set-ups, the PRECISE Grinder-Millers drive mounted wheels up to 1 1/4" in diameter; unmounted wheels, cut-off wheels and metal saws up to 2" in diameter by 1/4" width and H. S. steel and tungsten carbide Midget Mills up to 3/8" in diameter and 1" width. Soft materials such as wood, rubber and plastics are worked as effectively as glass, Fiberglass and the hardest metals. Motor is protected against overloads by replaceable Fusetron and sealed, micro-precision ball bearings are lifetime lubricated. SUPER COOLFLEX Flexible Shaft Attachment, Speed Controls and other accessories are available as optional equipment.



## SPECIFICATIONS FOR PRECISE SUPER 50

Voltage: 115 volts DC/AC, 25-60 cycles. Will operate on lower voltages and on voltages up to 440 when used with voltage adapters.

Speeds: Free speed above 45,000 rpm. Load speed range from 15,000 rpm to 45,000 rpm. Speed is controllable through use of PRECISE Speed Controls.

Power: Maximum power output at spindle, 1/4 H. P.

Collet Chuck: Type P parallel grip precision collets. Size range: .090" to .250".

Tool Housing: Chrome nickel steel machined inside and outside. Built for heavy duty.

Total Weight: Approximately 7 lbs.

# UNIVERSAL MOUNT *and* TOOL MOUNT *for* PRECISE SUPER 40

Specially designed, solidly built mounts to provide rigid support for straight-on use of PRECISE SUPER 40 in set-ups on lathe, drill press and other machine tools. Design also allows an unlimited range of applications in special set-ups for precision work in production. In Universal Mount on engine lathe, the PRECISE SUPER 40 converts to one of the finest lathe grinders in the field. No need for cumbersome adjustments to reach center. Direct-drive spindle eliminates equally cumbersome adjustments of belt and pulleys which, with belt slippage, are characteristic of conventional lathe grinding equipment.



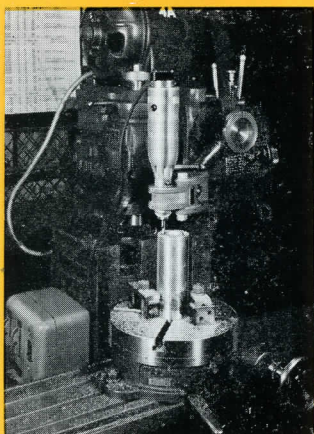
## UNIVERSAL MOUNT FOR PRECISE SUPER 40

Rigidly supports entire tool for straight-on applications and allows quick adjustment for heights up to 5 inches. Fits 10" to 16" engine lathes without further adjustment. Mounted in a few seconds to spindle of a standard 14" or 15" drill press and used with PRECISE Milling Table, PRECISE SUPER 40 becomes a high-speed router or vertical mill. Base fastens down with  $\frac{1}{2}$ " T bolt (bolt not furnished).

Shipping Wt.  
12 lbs.

Cat. No.  
6240

Code  
icon



Vertical milling in aluminum with the PRECISE SUPER 40 mounted in No. 12 Van Norman Mill.



Drilling small diameter holes in aluminum castings with precision Jacob's Chuck in PRECISE SUPER 40. Speed Control is adjusted for 30,000 rpm.



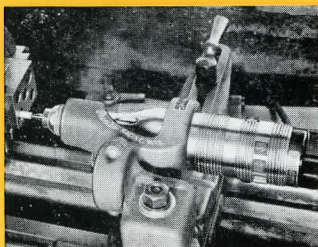
## TOOL MOUNT FOR PRECISE SUPER 40

Rigidly mounts PRECISE SUPER 40 or handpiece of the SUPER COOLFLEX Shaft Attachment in lathe or other machine tools (especially recommended for small lathes with under 10" swing). Fully and quickly adjustable for height up to 2 $\frac{1}{2}$ ". Fastens to lathe with  $\frac{1}{2}$ " T bolt (bolt not furnished).

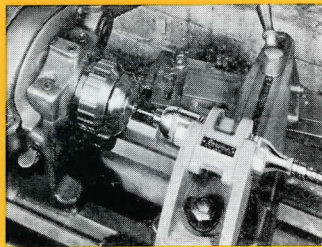
Shipping Wt.  
5 lbs.

Cat. No.  
6140

Code  
iei



Internal grinding at 45,000 rpm. in lathe. Note simplicity of set-up and convenience of height adjustment.



SUPER COOLFLEX handpiece in Tool Mount on small lathe doing internal micro-milling with tungsten carbide tool.

# The COMPOUND UNIVERSAL MOUNT for PRECISE SUPER 40

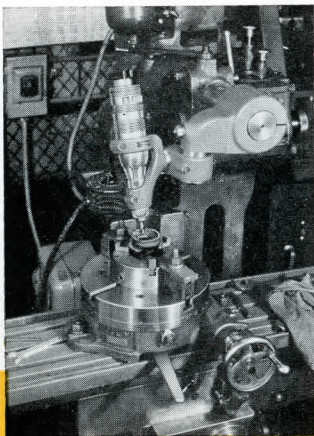
**ADJUSTABLE TO ANY ANGLE**

Precision designed and rigidly built from close-grained, semi-steel casting for mounting and positioning PRECISE SUPER 40 within three geometric planes. Degree of angle is accurately set by means of two engraved steel dials. Mounts PRECISE SUPER 40 for any set-up in a few minutes and offers unlimited cost-cutting advantages in precision applications on wood, glass, plastics and metals of all kinds, including the hardest steel.

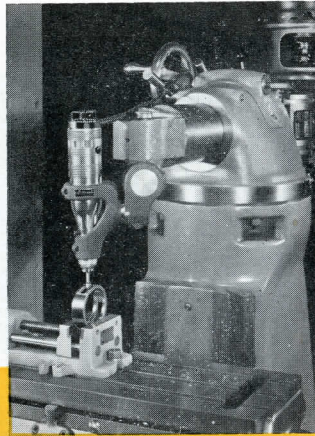
**APPLICATIONS:** With proper mounting base (see last inside page) this mount quickly attaches PRECISE SUPER 40 to lathe, drill press, surface grinder, boring mill, planer, vertical mill, horizontal mill, automatic boring machine and screw machine. Versatility of tool and mount also allows wide range of uses in special production set-ups.

Shipping Wt.	Cat. No.	Code
25 lbs.	6340	impi
27 lbs.	6340B*	inee

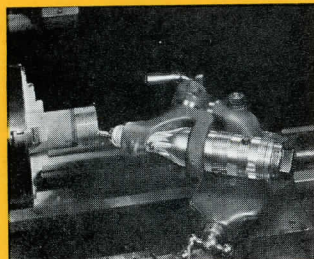
\*Cat. No. 6340B is suitable for mounting PRECISE SUPER 40 on Bridgeport Milling Machine. Has slightly larger base than Cat. No. 6340.



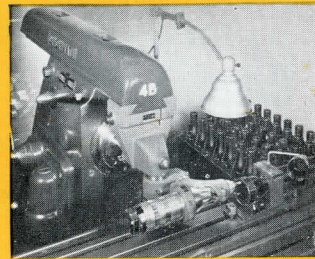
Carving model out of solid plastic in Universal Mill with rotary table. Note ease of angular adjustment through Compound Mount.



Grinding hardened steel ring with PRECISE SUPER 40 mounted in Bridgeport Vertical Milling Machine.



Milling thread in impregnated Fiberglass tubing. Note ease with which Compound Mount adjusts for helix angle.



Milling groove into plastic parts with tungsten carbide end mill. PRECISE SUPER 40 is attached by means of Overarm Mounting Base to Cincinnati No. 2 Milling Machine.



Finishing small wood pattern showing smooth, clean cutting action due to high-speed of PRECISE SUPER 40.

# UNIVERSAL MOUNT *for* PRECISE SUPER 50

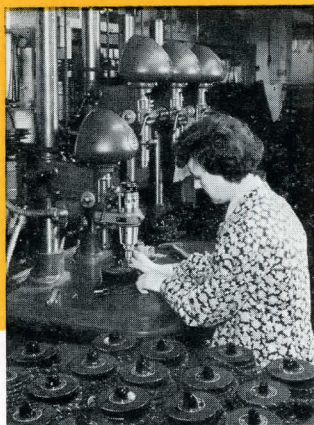
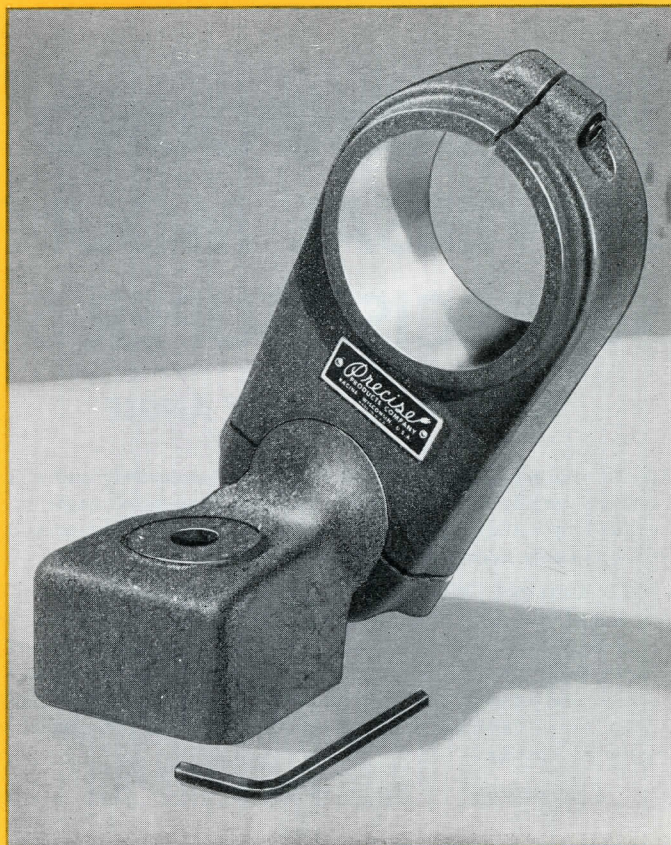
A sturdy, rigid mount (close-grained, semi-steel casting) for straight-on use of PRECISE SUPER 50 in production set-ups requiring precision at high-speed. Offers unlimited cost-cutting possibilities in small shops or large plants through mounting PRECISE SUPER 50 either on available machine tools or in special set-ups for high-speed grinding, milling, drilling, polishing or finishing in production.

**APPLICATIONS.** PRECISE SUPER 50 in the Universal Mount becomes the finest direct-driven lathe grinder in just a few seconds. Mounted to the spindle column of a standard 14" or 15" drill press and used with milling table, PRECISE SUPER 50 does the work of a high-speed router or vertical mill at a small fraction of the cost of heavier machinery. Ideal for converting standard drill press for precision small diameter drilling. Many other applications are possible on other machine tools or in specially designed set-ups for unusual jobs; dependable for heavy, continuous duty.

Shipping Wt.  
12 lbs.

Cat. No.  
6250

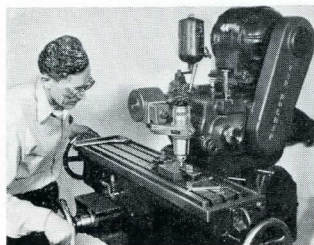
Code  
ina



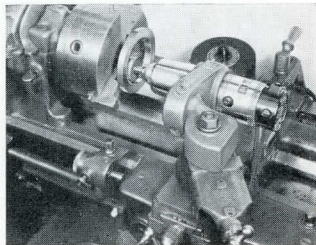
Drilling small diameter holes for mounting name plates in production.



Removing scale and core marks from aluminum castings in production using flexible abrasive spiral points at high speed in PRECISE SUPER 50.



Grinding hardened steel die in Van Norman No. 12 Milling Machine. Note efficient use of PRECISE Over-arm Mounting Base (Cat. No. 6600).



Internal grinding hardened steel ring with grinding wheel mounted in PRECISE Wheel Arbor (Cat. No. 14250).



Finish-grinding forming die at high speed with PRECISE SUPER 50 mounted in Cincinnati No. 2 Mill.

# The COMPOUND UNIVERSAL MOUNT for PRECISE SUPER 50

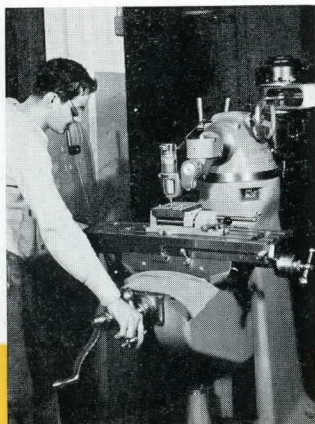
**ADJUSTABLE AT ANY ANGLE**

Mounts and positions PRECISE SUPER 50 accurately and rigidly for work within three geometric planes. Degree of angle is determined by settings on two engraved steel dials. Mounting and setting is easily accomplished in a few minutes.

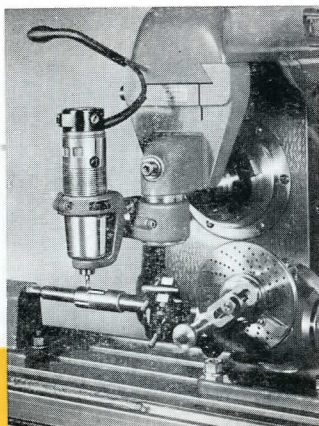
**APPLICATIONS:** With proper mounting base (see next page) the Compound Universal Mount holds the PRECISE SUPER 50 solidly for precision work in lathe, drill press, milling machine, surface grinder, boring mill, vertical mill, horizontal mill, automatic boring machine and screw machine. Cost-cutting versatility of PRECISE SUPER 50 in Compound Universal Mount extends to special set-ups for production.

Shipping Wt.	Cat. No.	Code
25 lbs.	6350	ion
27 lbs.	6350B*	inca

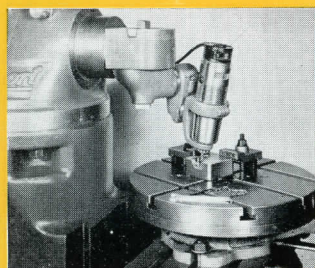
\*Cat. No. 6350B is suitable for mounting PRECISE SUPER 50 on Bridgeport Milling Machines. Has slightly larger base than Cat. No. 6350.



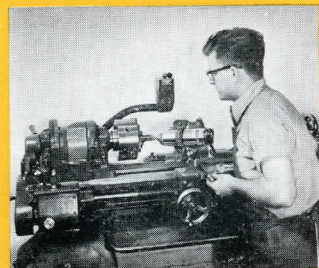
Finish-grinding die with PRECISE SUPER 50 mounted in Bridgeport Mill.



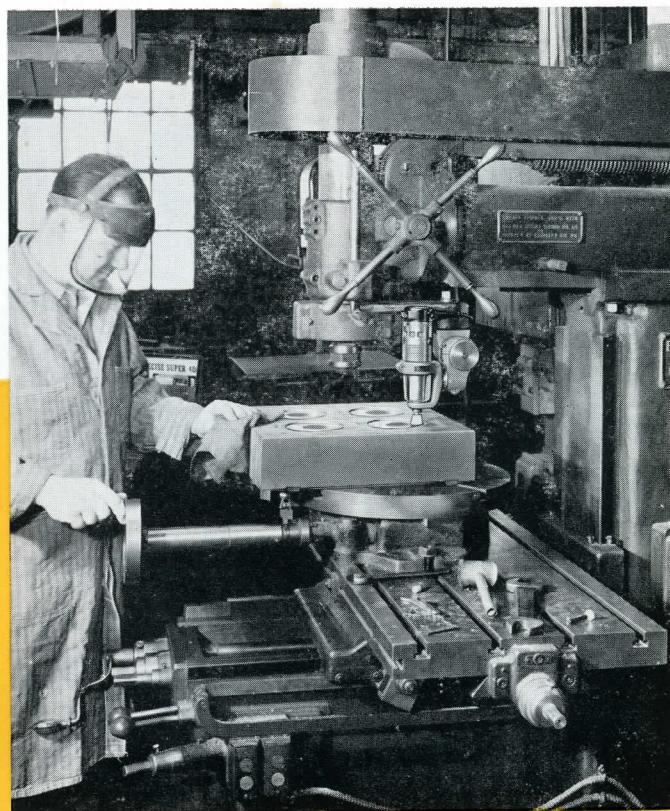
Milling groove 1/4" deep in steel with tungsten carbide end mill.



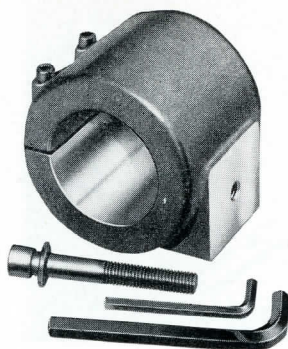
Milling hardened steel mold with tungsten carbide mill in PRECISE SUPER 50 mounted in Bridgeport Milling Machine.



Milling a clean-cut thread with tungsten carbide cutter in abrasive plastic. Note ease with which Compound Mount adjusts for helix angle.



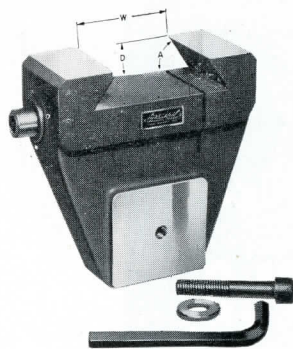
Re-grinding circular recesses in drop forging die with PRECISE SUPER 50 mounted in Ekstrom-Carlson Radial Mill.



### OVER-ARM MOUNTING BASE (Round Bar Type)

Mounts for PRECISE SUPER 40 and PRECISE SUPER 50 attach to stationary machines by either this mounting base or the one described at right. For machines with bar type over-arms it is necessary to specify the size of bore to which mounting base is to be fitted. Base is cast from high-grade, close-grained semi-steel; precision machined and finished in gray crackle.

Ship. Wt.	Cat. No.	Range of Bore	Code
32 lbs.	6600	2" to 3 1/4"	iona
40 lbs.	6700	3" to 4 3/8"	ione



### OVER-ARM MOUNTING BASE (Dovetail Type)

For mounting PRECISE SUPER 40 or PRECISE SUPER 50 in Universal or Compound Mounts to machines having dovetail over-arms. When ordering it is necessary to give the following dimensions: (W) width, (D) depth, and (A) angle. The base is cast from high-grade, close-grained semi-steel. Precision machined; gray crackle finish.

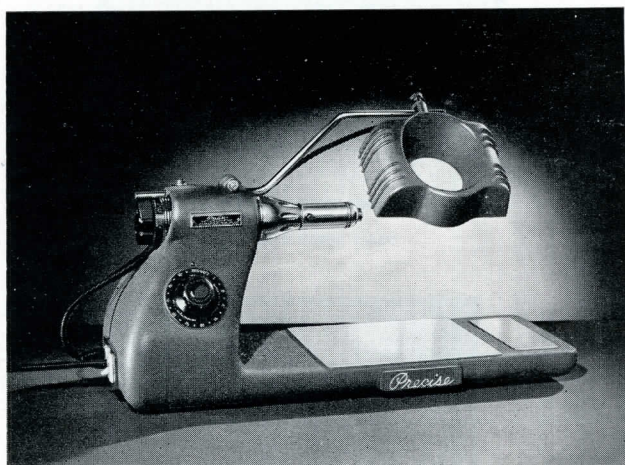
Shipping Wt.	Cat. No.	Code
40 lbs.	6800	ioni



### PRECISE PLANE MOUNTS

Provide rigid, accurate mounting for PRECISE Grinder-Millers on flat surfaces for special production tooling. Mount bases are sufficiently heavy to allow threading for bolt mounting or for dovetailing where the PRECISE Grinder-Miller is to be used in slide tooling. Made of close-grained, semi-steel castings with precision-machined mounting surfaces. Grinders shown are not included.

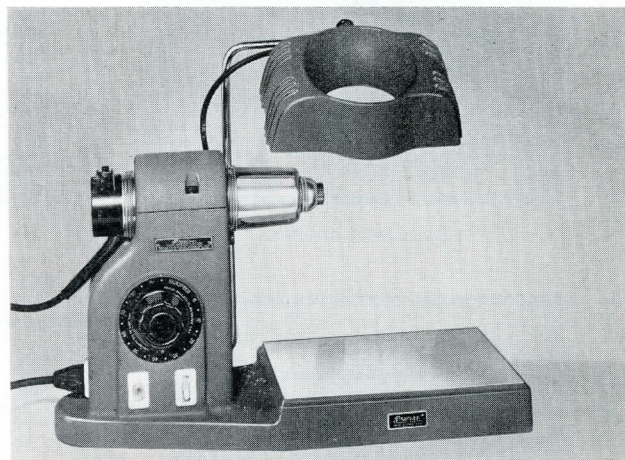
	Ship. Wt.	Cat. No.	Code
For PRECISE SUPER 40 (at left)	9 lbs.	6440	ira
For PRECISE SUPER 50 (at right)	9 lbs.	6450	iris



### VARI-SPEED LATHE FOR PRECISE SUPER 40

Bench-type lathe stand fully utilizes speed, power and precision of PRECISE SUPER 40 for production finishing of small parts. Precision machined lathe base measures 9" x 8 1/2". Adjustable Magni-Ray Unit with two 15 watt bulbs provides approximately three power, glare-free magnification of work field. Built-in speed control with calibrated control knob regulates speeds within a range from 15,000 to 45,000 RPM. Wood covered tool compartment is recessed in base.

Shipping Wt.	Cat. No.	Code
70 lbs.	4100	agist




### VARI-SPEED LATHE FOR PRECISE SUPER 50

Bench type lathe complete with PRECISE SUPER 50 Grinder-Miller. Ideal for machining small parts in production. Precision-machined lathe base measures 8 3/4 x 7 5/8 inches. Entire work field is illuminated without glare and magnified approximately three times by adjustable MAGNI-RAY Unit. Calibrated knob regulates built-in speed control with speed range from 15,000 to 45,000 rpm.

Shipping Wt.	Cat. No.	Code
75 lbs.	4500	ake

**SPECIAL MOUNTS AVAILABLE UPON REQUEST**

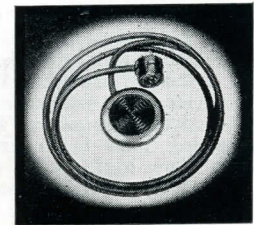


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Manual and Catalog featuring com-  
plete tool sets in H. S. Steel, Tung-  
sten Carbides, Abrasives and  
Diamonds for micro-finishing.

\*\*\*\*\*



A black and white photograph of a cylindrical, textured metal device, likely a component of a vacuum furnace. The device has a central top cap with a small, dark, cylindrical protrusion. A coiled cable, possibly braided or insulated, extends from the side of the cylinder and terminates in a small, cylindrical connector with a threaded base. The entire assembly is set against a light, textured background.

**PRECISE PRODUCTS COMPANY, RACINE 8, WIS.**

FORM FG8-10M-450